

**ABSTRACT**

5           Heat exchangers, constructed in accordance with principles of this invention, comprise a plurality of first passages, for transporting a first fluid or gas therethrough, and one or more second passages for transporting a second fluid or gas therethrough. The second passages are positioned adjacent to the first passages to permit a desired transfer of thermal energy from the first passages to the second passages. At least one  
10 manifold is placed in communication with one of the first or second passages. The manifold includes an opening disposed therethrough for receiving or dispensing the first or second fluid or gas to or from the first or second passages. The heat exchanger includes a flow director disposed therein for diverting or distributing the flow of first or second fluid or gas in a manner different from a natural fluid or gas flow within the heat  
15 exchanger. The flow director can be provided as an integral part of the heat exchanger itself, or can be provided as a separate element within the heat exchanger.